

Stout Magazine

Fall 1991

TECHNOLOGY TRANSFER

Promoting Economic Development Through
Instruction, Public Service and Applied Research

TECHNOLOGY TRANSFER

Students and faculty benefit from participation in the Stout Technology Transfer Institute's economic development efforts

The economic development centers in the UW-Stout Technology Transfer Institute have earned a lot of press ink in the last few years. JI Case, SNE Enterprises, Kewaunee Engineering — all are companies that relied on UW-Stout for assistance in improving productivity and efficiency.

The newspapers usually concentrate on the number of jobs created or saved through the improvements. But there is a second, equally valuable benefit of STTI, according to Larry Schneider, head of STTI and assistant to the dean of the School of Industry and Technology. The centers' activities provide field experiences for students, generate opportunities for faculty to grow within their disciplines and enhance teaching through faculty involvement with "real world" problems.

Participation in projects allowed Bob Meyer to develop a specialty area — and a course to go with it.

"I developed my own expertise in manufacturing simulation," said Meyer, an associate professor in the technology department. "It's a way for a company to check out ideas before investing a lot of money. We can do a computer simulation which may include a plant layout or a new management practice to find out what will happen."

The course, "Design and Simulation of Manufacturing Systems," was a direct result of his involvement in STTI projects, Meyer said. Through the projects, his area has also received

practice on several types of software and a Computer Aided Design-Computer Aided Manufacturing (CAD-CAM) system for student use. Other benefits include "real life" examples that participating instructors can use to illustrate points in the classroom, Meyer said.

"That sort of thing always travels back to the classroom," he said. "Impressions we bring back help us provide examples, and help students get a feeling of what industry is like."

Instructors who participate in STTI projects say the association with business and industry allows them to test their curriculum. The resulting updates allow classroom instruction to more closely reflect the needs of business and industry, according to Jerry Johnson, who teaches CAD, drafting and technical drawing classes in the technology department.

"By working on the projects, we found new software and new ways of putting projects together," Johnson said. "We take a lot of the things we learn on the projects and use them in the classroom."

Johnson said his first teams of students reacted to decisions made by others in the projects and concentrated on drawing plans for modifications of buildings. Later teams were able to also participate in the decision-making process, working with management and floor personnel.

The combination of full-time teaching and working with STTI projects can get "wild at times," Johnson said, but he enthusias-

"Impressions we bring back help us provide examples, and help students get a feeling of what industry is like."

— **Bob Meyer**

tically endorses the involvement as a way to maintain contact with industry and provide experiences for students.

"It's not so much just working at UW-Stout. It's more than work study," he said. "It is experience with a company, with their personnel. It's a jewel they can put on their resume."

Schneider emphasized that students are not handed the jobs. STTI usually channels student positions through the co-op program, managed by Career Services, and relies on that office to screen applicants for positions.

"We ask the company to work up a job description that includes the type of background and preparation the student should possess," he said. "In almost all cases, the company makes the final decision."

The lessons students receive are often ones the classroom simply cannot provide. As a member of an STTI team, Chris Burt worked eight months at Felker Brothers, a Marshfield manufacturer of stainless steel pipe and fittings. He used CAD and other software to redesign the standard drawings for the company's pipes and fittings.

"You learn that you don't ask an open-ended question if you

need specific information," he said. "You ask the right question."

Burt, an applied technology major, currently holds a co-op position with Northern States Power Co. He believes his work experience on the STTI site helped prepare him for the co-op.

Burt plans to graduate in May 1992, and will be seeking a career in making manufacturing more efficient — much like the goal of several of the centers under STTI.

Chris Bladl graduated in May 1991 in industrial technology. He learned about the STTI centers through his CAD instructor.

"I was able to get real life plant experience without interrupting school, and I got to work for four companies," he said.

Although he had studied plant layout, participating in the STTI projects provided an opportunity to become involved in the critical analysis of a plant, and plans for its improvement.

"It let me see how things work in a plant," Bladl said. "I had experience working with upper level management and the people on the floor."

Douglas Frank, an industrial technology major, worked at SNE Enterprises in Wausau from June 1990 to January 1991. He

continued next page

On the road to improvement

It's 6 a.m., and snowing. In a back lot at UW-Stout, a car is running. Glenn Gehring and Naidu Katuri join Larry Schneider in the warming interior. They drive north. The team from UW-Stout's Manufacturing Technology Transfer (MTT) program reaches the client company by 11 a.m., just in time for a quick lunch before the day's real work begins. For the next four hours, Schneider will give a presentation on Value Added Manufacturing (VAM) to a group of employees of a manufacturing company, one of MTT's newest clients. Katuri, manager of the project, will give Gehring a tour of the plant. The tour allows him to assess the company's operations and lays the groundwork for technical recommendations on how to apply the principles of VAM.

What is VAM and what does it mean to these employees? VAM is a plan for continuous improvement in an organization, encompassing management and all phases of production. For the company, it could mean the difference between survival and shutdown. Half of the company's workers have been laid off in just two years. Outdated physical facilities and associated efficiency problems have compounded the effects of intense competition. Struggling, but with a strong will to survive, the company contacted UW-Stout's MTT program for help.

Applying the plan will require restructuring the company's traditional manufacturing methods, including changing plant layout, material flow patterns, and management information systems. The company may have to change its traditional approaches to inventory, quality assurance and waste.

It's all-encompassing. And it's Schneider's job to sell it to the employees, to gain their confidence in the plan and enlist their cooperation in implementing it. It isn't always easy. There are unions to consider, a natural distrust of outsiders, concern about methods and motives, issues of pride, resentment and skepticism. The plan challenges accepted manufacturing traditions. It requires employees and management to think differently about their roles and the processes they control.

The employees have questions: Does the plan have corporate backing? Will it mean loss of jobs? It seems drastic — are there alternatives?

The plant manager makes a strong statement in support of the plan, and as the

employees leave there is a feeling that they are receptive. They have been asked to become involved in the company's survival, to find ways to improve the company, to keep open minds and accept the changes. Most of them have years invested in their jobs — some, decades.

Schneider joins the others at a hotel, to review the presentation and refine it for tomorrow, when another group of employees will be in the seats. The rest of the company's employees will attend presentations in the following weeks.

By 11:30 the next morning, Schneider has finished the second presentation. After a quick lunch, he, Gehring and Katuri meet with management to review existing material flow patterns. They critique the production routes. How many times is a part moved from one area to another, from welding to blasting to subassembly to inspection and back to welding? Are all the moves and processes necessary? Should departments be closer together? How can equipment be rearranged to improve efficiency?

The client will have to be committed to change to invest the time to examine production routes, envision the best routes, and devise a plant layout that is the most efficient for most products. But layout is only part of the equation. Scheduling strategy, inventory levels, quality control and appropriate technology are also vital. To compete successfully, relocating equipment is not enough. Every element of the VAM equation must be considered. MTT provides support and direction, but the company employees and management understand the responsibility to make it work is theirs.

It's 3:30 p.m. and snowing when the MTT team begins the long drive to Menomonie. Tomorrow, Schneider and Scott Wisner, director of another MTT project, will drive to northeastern Wisconsin to present VAM strategies to employees. On Monday, the team will drive to yet another company, in north central Wisconsin.

by Kirsten Berkemer
Research Specialist
Stout Technology Transfer Institute

"I was able to get real life plant experience without interrupting school, and I got to work for four companies."

- Chris Bladl

was involved at a time when the company was constructing a new 650,000 square-foot building, the largest manufacturing plant built in Wisconsin in this decade.

"They needed support through the construction process. I did a lot of drawing on CAD — elevations, telephone system, hook up of machines, lighting layout," he said. "Anything to do with construction."

By the end of his work experience, the company was up and running in its new facility, Frank said. Although he has worked for other companies, Frank said his experiences at SNE gave him confidence.

"It satisfied a lot of the questions you have going on your first job," he said. "How you fit in, your role with the engineering staff, your relationship with the workers on the floor. It gives you an idea of how to document things."

This semester a new group of students is participating in projects through STTI. Faculty are helping companies address a new set of problems. And while the press will concentrate on the economic benefits of the interaction, UW-Stout participants can't help but reflect on the impact of STTI on campus.

"It's invaluable. A lot of the advances we've made in our school have come either directly or indirectly out of the projects we've done through STTI," Johnson said.

As this issue was nearing completion, Stout Magazine learned that the Manufacturing Technology Transfer program had been named to receive an award from the National Association of Management and Technology Assistance Centers for its work with the Kewaunee Engineering Corporation in Kewaunee, Wis. This is the second award in four years received by the program from NAMTAC.

Stout Technology Transfer Institute

The Stout Technology Transfer Institute provides a single contact point for people and organizations interested in six UW-Stout economic development centers. Through activities with business and industry, students and staff gain experience solving technical problems, providing management assistance and training employees. At the same time, the centers help industries and businesses, contributing to the economic stability of the region.

The Center for Innovation and Development (CID) and the Manufacturing Technology Transfer (MTT) program assist business and industry in areas of expertise of UW-Stout faculty. CID projects are undertaken on a cost recovery basis, and MTT projects are funded jointly by UW-Stout and UW-Extension. Technical assistance may include product engineering and design; prototype production; product evaluation; and assistance in technical training, management, marketing, processes, control and automation; packaging and distribution; and other areas.

The Loss Control Center provides assistance in safety and health risk control. Services include on-site training sessions in loss control, testing for noise, contaminants and ventilation, and field projects conducted at industrial locations. Staff conduct research projects, and offer seminars and consultation on industrial loss control, industrial hygiene, and risk and control management. Projects are undertaken on a cost recovery basis.

The Packaging Research and Development Center helps manufacturers or individuals develop, test and evaluate packaging, using UW-Stout's state-of-the-art packaging laboratory. Projects are undertaken on a cost recovery basis.

The Center for Vocational, Technical and Adult Education assists educators in private and public vocational education settings and company training programs. The center helps educators identify their needs, contact resource people, conduct applied research, develop and evaluate programs, and apply research results.

The Stout Technology Park provides industry with a prime business location, plus all the advantages of locating near UW-Stout and its applications-oriented programs. Tenants of the Stout Technology Park have access to all the resources available through the centers, including consultation with faculty, opportunities for joint research, well-qualified students for internships or hire, seminars, and access to national data and information processing systems.

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- Jerry Johnson

TECHNOLOGY TRANSFER CASE STUDIES

Wadia Digital Corporation

Description: The firm employs 25 people to manufacture high end audio equipment, much of it for the recording industry. The company's products are distributed worldwide and have won awards in international competitions. Sales are nearly doubling each year. The company plans to construct a manufacturing facility in the River Falls Industrial Park.

Goals: To achieve its goal of becoming "a world class leader in research and development and manufacturing abilities and to excel in our internal management" Wadia Digital needs to address issues such as high inventory, complex materials flow and assembly routes, and problems associated with a rapidly growing workforce and changing job functions.

Activities: UW-Stout's Center for Innovation and Development (CID) assisted in designing the layout and material flow for the new building. A 1991 graduate of UW-Stout is working with Wadia under CID's direction to develop CAD drawings of the building, materials flow and equipment locations. CID is also providing employee training and consultation on ways to minimize conflict between the demands of product design and the cost of manufacturing, including application of product design methods.



SNE Enterprises

Description: In 1986 SNE's central Wisconsin window and door manufacturing facilities occupied five buildings in Wausau and Stevens Point. Most of the buildings were leased; all were old and offered little opportunity for expansion.

Goals: To consolidate operations in a modern, efficient plant.

Activities: UW-Stout assisted SNE Enterprises in planning and designing a new manufacturing facility which would allow for the consolidation of operations at Wausau. The resulting 650,000 square-foot plant, the largest built in Wisconsin this decade, began production in 1990. The plant employs 800 people.

The project provided learning opportunities for one to three co-op students each semester. Several students were also hired for summer jobs, and robotics, simulation and English classes provided assistance. UW-Stout faculty and student participation included: plant and site layouts for the new building; determination of energy costs; introduction of several new computer programs to the company and training the staff in its use; and assistance in all phases of plant design, layout and equipment selection. In addition, students and staff conducted feasibility studies and pilot projects on new manufacturing techniques. They also conducted a study to minimize the paper work involved in manufacturing processes and entered a library of drawings of existing equipment into the company's CAD system.



Barko Hydraulics

Description: The company is located in Superior and manufactures heavy equipment for forestry and construction industries. The firm employs 140 people.

Goals: To help Barko Hydraulics update its physical facilities to eliminate associated efficiency problems and meet the challenge of intense competition from other manufacturers.

Activities: Two UW-Stout students developed computer aided design (CAD) drawings of the facility and a CAD library of hundreds of pieces of information about the facility and its furnishings. Under MTT's direction, a plant-layout team of Barko employees is developing improved layouts. A second team is assisting in the selection of a new computerized accounting, scheduling and ordering system that will affect nearly all plant operations. MTT has also introduced materials usage and processing concepts to improve efficiency and reduce inventory.



Winter Woods

Description: The company makes balsam and pine cone wreaths and other Christmas items for florists, fund raisers and the craft industry. Winter Woods is an important employer in Glidden, a rural community near the Chequamegon National Forest, providing 15 full-time and 50 seasonal jobs.

Goals: To help Winter Woods meet the increasing demand for its products and increase the year-round employment base.

Activities: UW-Stout's Manufacturing Technology Transfer program helped improve materials flow for more efficient production. A UW-Stout student designed specialized material handling tools and equipment guards for pine cone processing, and prototypes will be developed by a specialist. MTT provided funding for training of four employees at Indianhead Technical College, in areas that will improve the efficiency of the company. A UW-Stout student reviewed computer programs to select the package most appropriate for Winter Woods, and helped train employees in the program's use.



Kewaunee Engineering

Description: A former shipbuilding firm in Kewaunee expanded to supply massive steel fabrications to other manufacturers including Caterpillar, Carrydeck and Payhauler. Short-term expansions had resulted in 13 additions to the main plant.

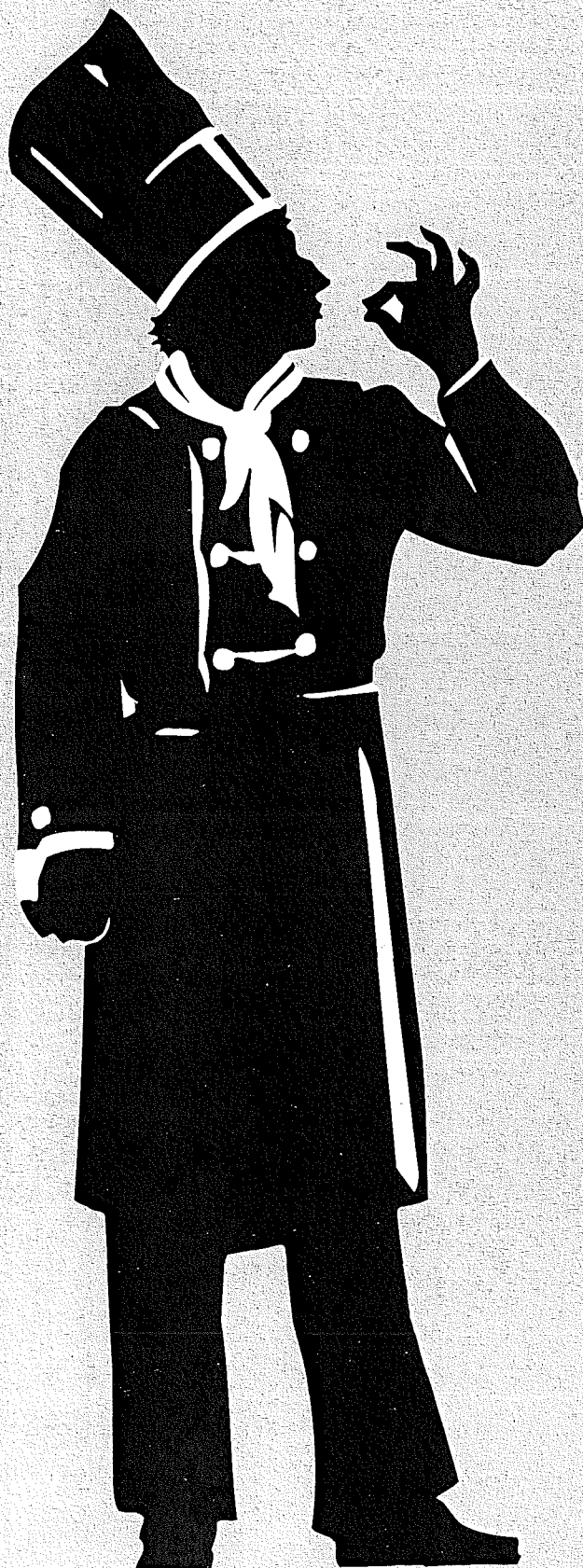
Goals: To consolidate and modernize facilities to optimize production, incorporating the existing facilities into plans.

Activities: Four project teams worked with management to design and implement a strategy for expansion and increased production. The teams included UW-Stout faculty, three student consultants, and several co-op students. The areas of technical assistance included facility layout, material flow, set-up reduction, quality assurance and cost management. The teams also assisted with employee team building, training employees on CAD systems, and developing the CAD library.



A Centennial Culinary Collection

Contest sparks interest in recipe development



Entree

*Juliann Ristow
Hibbing, Minnesota*



Chippewa Quiche

1/3 cup uncooked wild rice
1 cup water
1 cup all-purpose flour
1/8 tsp. salt
1/3 cup lard
2 Tbsp. water
1/2 lb. ham, diced
8 oz. Swiss cheese, grated
2 Tbsp. butter
3 green onions, chopped
1/2 large green pepper, chopped
4 eggs
1 cup whipping cream

1. Cook wild rice in small sauce pan, with 1 cup water, for 30-40 minutes or until rice is tender.
2. Preheat oven to 450° F.
3. Mix flour and salt.
4. Cut in lard.
5. Add water.
6. Chill for 5 minutes.
7. Roll out and place in 10" pie pan.
8. Bake 5 minutes.
9. Reduce oven heat to 375° F.
10. Sprinkle wild rice, ham and cheese in shell.
11. In small skillet, melt butter, add onion and green pepper. Cook over medium heat 3-4 minutes. Sprinkle ingredients into shell.
12. Beat egg and whipping cream together, pour into shell over onion and green pepper.
13. Bake 35-45 minutes or until set.

Yield: six hearty portions

Bread

Sharon Stewart
Rice Lake, Wisconsin



Poppy Seed Bread

- 1/4 cup poppy seed**
- 1 cup buttermilk**
- 1 cup butter**
- 1 3/4 cups granulated sugar**
- 4 eggs, separated**
- 1/2 tsp. almond extract**
- 1/2 tsp. vanilla extract**
- 2 1/2 cups plus 2 Tbsp. all-purpose flour**
- 1 tsp. baking powder**
- 1/2 tsp. baking soda**
- 1/4 tsp. salt**
- 1/4 cup granulated sugar**
- 2 tsp. cinnamon**

Orange Glaze:

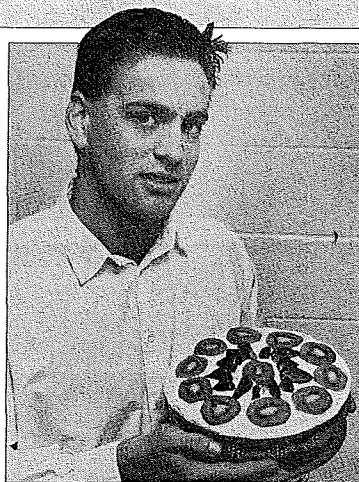
- 1 cup confectioners sugar**
- 1 tsp. melted butter or margarine**
- 1 to 2 Tbsp. hot orange juice**
- 1 tsp. grated orange rind (optional)**

1. Add poppy seed to buttermilk and let soak for one hour.
2. Grease two 9 x 5-inch loaf pans.
3. Preheat oven to 350° F.
4. Cream butter and 1 1/4 cups sugar.
5. Add egg yolks, almond extract and vanilla.
6. Beat well.
7. Sift flour, baking powder, soda and salt together.
8. Add dry ingredients alternately with buttermilk mixture.
9. Beat egg whites until stiff peaks form and fold into batter.
10. Mix 1/4 cup sugar and cinnamon.
11. Pour small amount of batter into pans and sprinkle half the cinnamon sugar over batter.
12. Add remaining batter and then remainder of cinnamon sugar.
13. Bake for 45 minutes.
14. Cool for 5 minutes and remove from pan.
15. Blend orange glaze ingredients in small bowl until smooth.
16. Drizzle glaze over bread.

Yield: *two loaves*

Dessert

Shannon Groth
Wausau, Wisconsin



Strawberry Trifle

- 1 plain bundt cake mix**
- 2 3-oz. packages strawberry gelatin**
- 2 1/2 quarts fresh strawberries, quartered (reserve 1/2 quart for garnish)**
- 2 8-oz. containers strawberry yogurt**
- 1 cup whipping cream**
- 2 fresh kiwi fruit**

Pudding Mixture:

- 2/3 cup granulated sugar**
- 2 Tbsp. cornstarch**
- 1/4 cup whole wheat flour**
- 1/2 tsp. salt**
- 3 cups milk**
- 3 egg yolks, slightly beaten**
- 1 Tbsp. butter or margarine**
- 1 tsp. vanilla**

1. Preheat oven to 350° F.
2. Prepare bundt cake according to package directions. Cool. Cut in 1-inch slices.
3. Completely dissolve gelatin in 1 cup boiling water. Add 2 cups cold water. Chill until slightly thickened. Add 2 quarts of strawberries.
4. Prepare pudding mixture.
5. Combine sugar, cornstarch, whole wheat flour, salt and milk; cook on high in microwave until thick, stirring often.
6. Gradually stir 1/2 of hot pudding mixture into egg yolks. Add remaining pudding mixture and return to microwave for 3-5 minutes or until thick, stirring often.
7. Stir butter and vanilla into pudding mixture. Cover with plastic wrap and cool in cold water bath.
8. Layer bottom of very large glass bowl with 1/3 of bundt cake slices. Spread 1/2 of gelatin-strawberry mixture over cake slices. Spread 1/2 of pudding mixture over gelatin-strawberry mixture. Spread 1/2 of yogurt over pudding.
9. Repeat these 4 layers.
10. Layer last 1/3 of bundt cake slices over yogurt.
11. Whip cream and spread over cake.
12. Garnish with reserved strawberries and kiwi fruit.

Yield: *20-24 servings*

Men in Child Care

Day care centers have few male caregivers

Bruce Cunningham was scanning job listings at an unemployment agency when he overheard a man joke that he was going to get a job in a day care center where he could just play with kids all day.

"That didn't sound too crazy. So I looked at the listings under day care and within two weeks I had a job," Cunningham said. He worked in day care settings for about 10 years.

Bob Salt was working on a master's degree in child development and family relations and needed a job to help finance his schooling. Employment in a day care center provided him with needed money and a chance to learn more about children. He worked in day care centers for about three years.

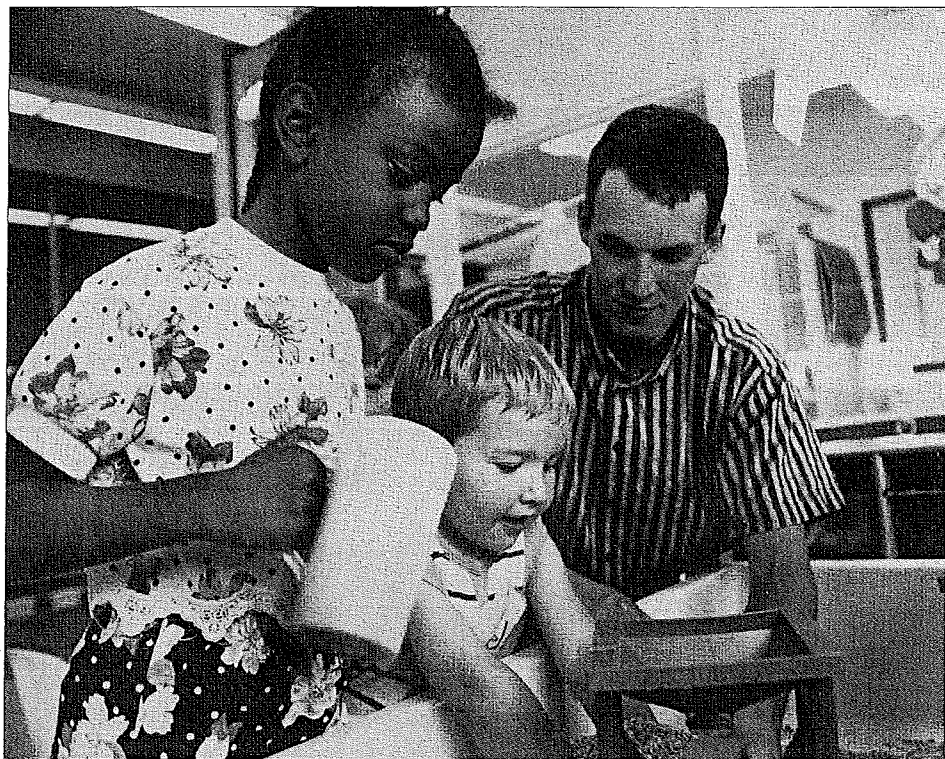
The two are now associate professors in UW-Stout's department of human development, family living and community educational services. They are among the few men who have worked in day care settings. Males account for approximately 7 percent of the more than 300 students in UW-Stout's early childhood education program. In Wisconsin, four men are teaching at the prekindergarten level in public schools, contrasted with 210 women. Men are also scarce in private day care settings.

"Low pay is one of the major issues," Cunningham said. "Men are still usually regarded as the premier wage earner in the family, and child care often pays little more than minimum wage."

Young adults make many of their career decisions in adolescence, when their concept of what it means to be a man or a woman is undergoing rapid change.

"I know very few 18- or 19-year-old men who are secure enough in their identity to be able to do a non-traditional thing like take a job at a day care center," Salt said.

Men who enter the child care profession are sometimes regarded with suspicion. Parents and co-workers may wonder if they are going to abuse the children.



Maija Taylor (left) and Russell Neidermyer (center) play under the supervision of Steve Petznick, one of the few men specializing in child care. Petznick is a graduate of UW-Stout's early childhood education program.

"What research shows is that men are less likely to be child abusers than women are in our society, but we still have this image of man as perpetrator," Salt said.

Day care centers have taken precautions to protect children—and to protect employees from suspicion, Cunningham said. Adults are usually not allowed to be alone with a child, for example.

"Many men who work in child care report that while they have to put up with negative stereotypes, they also get very positive feedback from parents," Cunningham said. "Parents say they're glad there is a man working at the day care or school."

It's not that men and women treat children that differently. Cunningham said research indicates that while males may engage in a little more rough and tumble play, male and female care givers are more similar than different. Salt said the benefit of having men working in day care settings goes beyond differences in

play or other activities.

"It's just that they're there. It says to children that men care about them," Salt said. "It gives options to boys and girls as they're growing up. It says they can do what they want to do in life, what they feel good at, rather than having the assumption that it is only women who take care of and care about children."

Salt said he also believes that men benefit from the interaction with children. Women on the average live seven or eight years longer than men. Salt believes that the difference is partly due to the small amount of nurturing physical touch men receive.

Children are often attracted to men who work in child care settings, because males are a novelty in the profession, Cunningham said.

"One man who worked in child care said he felt like a magnet to the children in the center," he said. "They were around him constantly."

Infant Massage Techniques

A gentle touch can communicate

When parents smooth open the tiny clenched fist of their newborn, they probably do not realize they are helping their child relax and they are communicating their love. That gentle touch can be part of infant massage, a method of bonding with a child advocated by a UW-Stout instructional specialist.

Nan Olson supervises student teachers at UW-Stout's Child and Family Study Center, where early childhood education students receive experience working with preschool children. She began massaging her children when they were infants, as part of their bath routine. Through workshops she has helped parents learn infant massage.

"People find ways to communicate with babies," she said. "I think parents have a basic need to touch the baby, and the baby has a basic need to be touched. This is just one way of meeting that need and communicating with the child."

Olson stressed that the massage is very gentle and soothing, mostly just moving the skin. Parents should talk to the child as they massage. She recommends that parents begin the session before a feeding, when a child is alert.

"What you're looking for is eye contact," she said. "You're looking for an interaction, a sort of dance of understanding of what feels good and what doesn't feel good and what the baby is enjoying. It's a time to communicate not just through touch but with your eyes, with little songs or phrases that are special for the two of you."

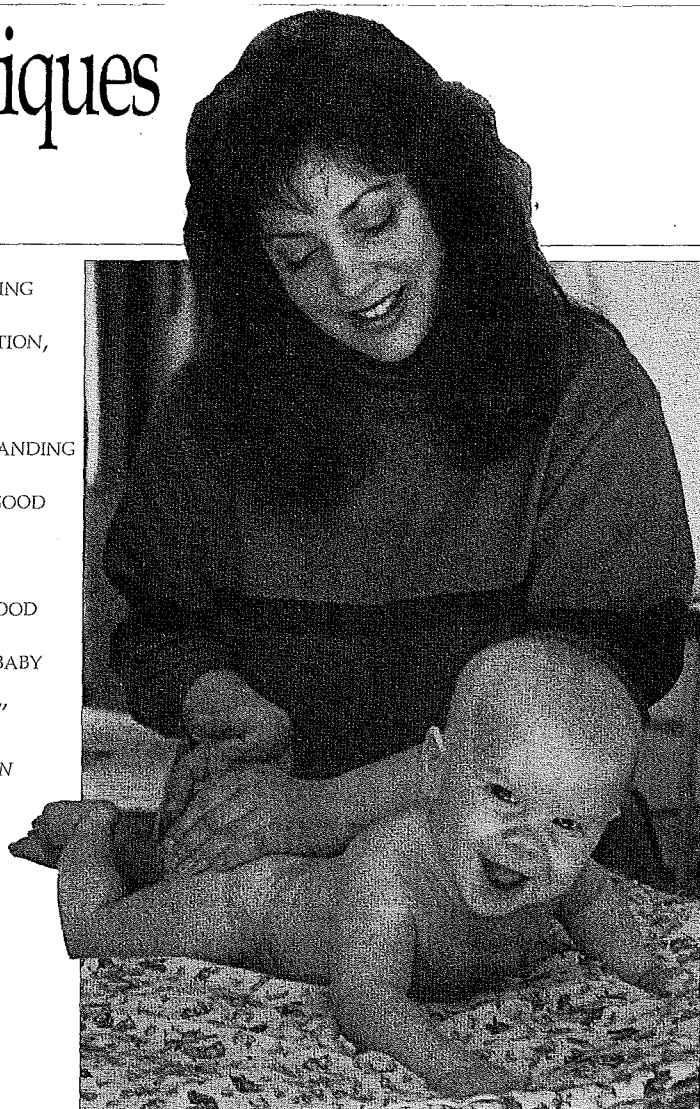
Parents place the infant on a pillow on the floor, or on a dressing table. They sit or stand next to the child and coat their hands with non-petroleum based oil.

"You hold your hands up with the palms out for the baby to see, and he realizes that that's the signal that a massage is coming," she said. "You can tell by the way the babies respond whether or not they want a massage."

Older infants will often reach out to their parents to show they are looking forward to the massage, Olson said. If

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—NAN OLSON



they give signs that they do not want the massage, parents should end the session.

"It's an interactive time, and if it's not going well for either of you, don't do it," she said. "That's not the idea. It's not something that has to be done, like giving babies a bath because they're dirty."

Books on infant massage provide photographs of recommended techniques. Olson said what's important is that the massage is gentle, and that parents learn what their infants enjoy. Parents massaging older children should be able to feel the tension leave their bodies, Olson said.

"I see the major benefit as being that you learn to understand those non-verbal signals between each other," she said.

Olson began offering infant massage workshops when she realized that increasingly, technology is allowing parents to distance themselves from their babies.

"We have bottles and little gadgets.

You put the child in a swing and wind it up. So much of our technology is aimed at getting the baby to leave you alone so you can do dishes or clean house or whatever," Olson said.

Research with premature infants shows that massage can help a child's development, and that infants who are not touched or held may fail to thrive. Olson said infant massage can be a good communication tool for all parents, but some groups can realize even more benefit. It can help parents bond with their adopted children, and can improve the relationship between parents and children who have to be hospitalized after birth, she said.

"You're communicating in so many ways," she said. "You're saying things that are hard to say with words. How else do you establish a relationship with a baby, without touching them?"

Communicating With Your Kids

Children's play sends messages

Long before children master the complexities of speech, their faces, voices and body posture tell when they're happy or angry. More subtle emotions are harder to read, but parents can learn to understand their children's unspoken messages, according to a UW-Stout instructor.

Judy Brenholt, a psychotherapist who teaches in the human development, family living and community educational services department, said children age 2 and older are communicating more than their parents may realize.

"All behavior in children is communication. They're just little communication packages," she said.

Through careful observation in a play session, parents can learn to read their children's body language. Brenholt recommends that parents set aside a half-hour at the same time each week, to meet with the child in what she called "neutral territory." The play session should take place in an area where the child will have room to play without the parent worrying about damage to the carpet or furnishings.

The room should include a selection of toys that will allow the child to express herself, including a toy to express aggression, such as a toy gun. Some parents object to their children having toys that are linked with aggression, but Brenholt said children need a way to express their anger. The play sessions can provide that opportunity.

Parents need to

get on the child's level — "eyeball to eyeball," Brenholt said. They must explain the three rules of the play session to the child, and enforce them.

"You can't hurt me. You can't hurt yourself. You can't hurt the room," Brenholt said. "And if at any time those rules are broken, then the play session is over."

Children may test the rules, but they enjoy the play session so much that usually they'll follow them, she said. Parents have more difficult rules to follow.

"The parent can't ask questions or give directions," she said. "Questions are a power thing. It means that you want information that the child has to give to you. So what the parent does is feed back the feelings and the actions they see in the child. You have to focus on the child to be able to do that, and that's where the

connection begins."

Parents take a chance when they guess what the child's emotions are. They may be wrong. But children will let their parents know if they have misinterpreted the signals, Brenholt said. The play sessions provide a forum for children to learn to trust their parents and to develop confidence.

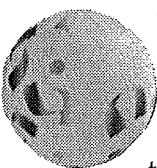
"It lets the child know that he has been heard, that somebody is looking at him and focusing on him and hearing what he's saying," she said. "It lets a child know that you've understood what you've heard, and if you haven't understood it, it gives him the power to correct you."

Early play sessions may be discouraging, Brenholt said. It takes time for the child to feel he can express his emotions to the parent, and it takes time for parents to learn to read the child's actions.

But if parents continue the sessions,

the rewards will be a closer relationship between parent and child, and greater skill in reading the body language of others, Brenholt said. Parents usually also feel more secure in their parenting, because they're not always trying to figure out what the child is saying. They know.

"It takes time to do these play sessions," Brenholt said. "It takes time to read your child, and yet it's one of those things that once you make the investment you don't need as much time for the rest of your communication with the child. You will be better able to understand what the child is saying."



Humanizing Mathematics

New approach makes numbers and terms more friendly

Someplace between integers and integrals, many students decide they don't want to learn mathematics anymore. At least one group, the Mathematical Association of America, is trying to maintain students' enthusiasm by "humanizing" math, according to John Hunt, a mathematics professor at UW-Stout.

Using the language of mathematics may create a wall of frustration that discourages students from learning. Humanistic mathematics includes translating the jargon of the field into terms that everyone can understand, Hunt said.

"People haven't the first idea what an Abelian operation is," Hunt said. "That's the \$3 term. The 50-cent explanation is that you can add two numbers in either order and get the same answer. Two plus three is three plus two. I can dignify it with the language. But why make people memorize that? They'll never use it again."

Refusing to be tied to the language of mathematics allows instructors to encourage their students to seek other ways to solve problems.

"I say no — I will not accept that you cannot work this problem," Hunt said. "Change the language. Change the approach. I have a sheet on problem solving that says basically if you don't like the problem, change it — carefully."

Part of the humanistic approach is to use whatever props or examples are necessary to help students understand a principle. Students "see" calculus concepts with the help of a large tin can and a circle of plastic. The shell of a sea creature helps students see the connection between the concept of a numeric Fibonacci sequence and nature.

The Fibonacci sequence requires students to take the two previous numbers in the sequence and add them: 1, 1, 2, 3, 5, 8, and so on.

"It was just a little mathematical game," Hunt said. "Except that if you look at the number of seeds in the expanding rings of a sunflower, you nearly exactly have a Fibonacci sequence. If you

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—JOHN HUNT



look at the golden ratio in art, it's related to the Fibonacci sequence. The shape of the chambered nautilus, a shell fish, is along the lines of the Fibonacci sequence. Part of the mystery, part of the folklore of it, is how these things fit together. That makes it human. That makes it fun."

The approach also encourages students to approximate or estimate answers, when appropriate. Hunt's students refer to some numbers as "ugly," because they are hard to manipulate. Asking students to multiply 397 by 12 is "ugly." But if they can change the numbers to 400 and 10 the numbers are less frightening. In a few seconds students can mentally approximate the answer.

"Most of the time you can make a quick estimate, a quick guess," Hunt said. "You can meet with instant success, and then you can fill in the details and you reserve the right to adjust your answer a little. It's a lost art that we have to revive."

The popularity of calculators has allowed some people to lose or not develop the ability to approximate answers, a skill that is used in many every day tasks.

"You should have an ability, whether you do it or not, as you walk through the line in the grocery store, to figure out what your bill is — ball park," Hunt said. "That's estimating. But look at the number of people you see walking through the store with calculators."

Like most mathematicians, Hunt is concerned about a predicted shortage of people who are specializing in mathematics. But he said he's just as concerned that everyone receive a good background in mathematics.

Many of the students Hunt teaches hope to become early childhood education teachers, working with children in the lower elementary grades. Hunt said his goal is to help those future teachers appreciate and enjoy mathematics, so they will pass their enthusiasm on to their students.

"A single year of poor math experience can take years of effort to undo," he said. "An enthusiastic teacher can light the spark so children can know and understand the fine art of mathematics."

Elderly Increasingly Choosing Suicide

A combination of factors often leads to choice

As medical researchers find ways to prolong life, an increasing number of older Americans are choosing suicide. Compared to adolescents, the elderly are more successful in their attempts and frequently give no warning signs, making it more difficult for loved ones and caregivers to intervene, according to Bob Wurtz, a professor of counseling and psychological services at UW-Stout. Wurtz is conducting research on factors that contribute to life satisfaction in later years.

From 1981 to 1986, the rate of suicide among the general population increased 5 percent; among the elderly, the rate increased 25 percent. In 1986, the suicide rate for the general population was 12.8 per 100,000 people; the rate for those aged 65 and older was 21.6.

Those figures include only deaths identified as suicides. The actual number of elderly who choose to die may be greater, Wurtz said.

"Often coroners are less likely to label a death of an elderly person as a suicide unless it's very clear," he said. "Older people can choose to die through not eating, through not taking medication properly or at all, or taking too much medication. People studying this issue say there are a lot of suicides among the elderly that are simply not identified."

Usually a combination of factors leads an older person to consider suicide. Some elderly may decide they are not satisfied with their quality of life, Wurtz said.

"Older people who are on a life support system or in a lot of pain may question if their quality of life is good enough to make them want to continue," Wurtz said.

Some elderly are concerned about becoming an emotional and financial burden to their families, Wurtz said. Loneliness, physical pain, diminished sexuality, economic anxiety and fear may also lead older people to consider suicide.

"Fear is one of the most reported concerns of the elderly: fear of dying, of being robbed or assaulted, of falling



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— BOB WURTZ

down," Wurtz said.

People who have lived independently may feel helpless or powerless, and may resent their increased reliance on others. A general feeling of loss may also contribute to an older person's decision to end his life.

"Loss seems to be a feature of aging," Wurtz said. "You lose health. You lose status. You lose friends to death or to moving away. You are often losing a spouse. You may be losing family members, maybe even a child."

Sometimes older people give no clue that they are contemplating suicide, Wurtz said. Others let their loved ones know through changes in life patterns, a decrease in their zest for life, increased use of drugs or alcohol, or increase in self-destructive behaviors. Older people may say they are not needed, or that they would be "better off dead."

"The fairly obvious sign is taking care of business — getting the will drawn up or revised, drawing up plans for burial, and so on," Wurtz said. "That in combination with other things could be a clue."

If family or friends choose to intervene, their actions must be sincere and long-term, Wurtz said.

"Somebody who cares needs to be in contact with our older people frequently enough to be aware of their state," he said. "It's not enough for just the mail carrier to say hello. Someone who cares and has some commitment to the person's welfare has to make frequent contact."

The contact could be just a telephone call or short visit. Wurtz said it is important that caregivers express their concern both in words and actions.

"Time is often the most precious gift you can offer," he said.

Making News

DePuy appointed vice chancellor

George DePuy has been appointed vice chancellor for academic affairs.

Since September of 1986, DePuy has been dean of the School of Information Systems and Engineering Technology at the State University of New York (SUNY) in Utica. From 1979-86, he was an associate professor of engineering technology at SUNY-Binghamton. He is highly accomplished in the fields of technology and industrial engineering, and currently serves as president of the Council of Engineering Technology in New York State — an association of 32 institutions offering associate and baccalaureate degree programs in engineering technology.

DePuy holds Ph.D. and M.A. degrees in instructional technology and engineering administration, respectively,



DePuy

In his last position, DePuy was academic administrator of five departments — computer science, electrical, industrial, mechanical engineering technology and telecommunications. His expertise has resulted in numerous private-sector consulting opportunities, including the design of a variety of electronic devices and the development of industrial education programs for IBM.

from Syracuse University. He earned a B.S. degree in electrical engineering from the New Jersey Institute of Technology (known today as Newark College of Engineering).

Kiley named head of computing

James Kiley has been named executive director of Computing and Telecommunications at UW-Stout.

Kiley has been director of Computing Services at Mesa State College, Grand Junction, Colo., since 1986. He has also served at Westmoreland County Community College as director of the Data Center; with General Electric Information Services Co., as project manager; at Computer Sciences Corp., as senior member of the technical staff; at Overly Manufacturing Co., as data processing manager; and with the United States Air Force in computer operations and programming.



Kiley

Administrative Services Division.

Kiley holds a bachelor of science degree in business administration from University of Phoenix and a master's degree in public administration from the University of Colorado.

Kiley heads a department which will include Academic Computing, Administrative Computing and Telecommunications, which were merged last year into one unit of the Admin-

Anderson named assistant chancellor

Richard E. Anderson has been appointed assistant chancellor for student services. This is an interim appointment of up to two years.

Anderson joined the staff in 1967 and was appointed to his present position, dean of counseling services, in 1973.

Anderson has been involved in a wide variety of special projects at the university. He helped establish the Ethnic Services Center and Co-op Education at UW-Stout. He also supervised a \$2.1 million remodeling project for Bowman Hall. He chairs the university's Design for Diversity Committee and the Com-



Anderson

mittee on Alcohol and Other Drug Abuse.

He is a member of the University of Wisconsin System Strategic Planning Committee for Student Services in the Next Decade.

Anderson holds an Ed.D. degree in educational administration from the University of North Colorado; and an M.S. in guidance and counseling and a B.S. in industrial education from Stout.

Larkin appointed dean of students

Joseph Larkin has been appointed dean of students at UW-Stout.

Larkin assumes the title held by Sam Wood who was also assistant chancellor before retiring in June.

In addition to serving as dean of students, Larkin will also supervise the areas of Admissions, Registration, Student Records, Financial Aid and Career Services.

Larkin, who joined the UW-Stout staff in 1966, has held the positions of associate dean of students, assistant to the vice president for student services and director for Financial Aid.

Larkin is president of the City Zoning Board, a member of the Menomonie Area Youth Baseball Board of Directors,



Larkin

past president of the Menomonie Rotary Club and a former Menomonie School Board member. He has also been active in UW-Stout and high school booster groups.

Larkin holds a doctor's degree in higher educational administration and a master's in guidance and counseling from Oklahoma State University; and a bachelor's degree in mathematics from UW-La Crosse.

Promotions and tenure announced

Promotions in rank, tenure designation and emeritus status for faculty and staff members were announced by Chancellor Charles W. Sorensen, following action by the UW System Board of Regents.

Promoted from associate professor to professor are James Byrd and Mary Rains, psychology; Annette Fraser, apparel, textiles and design; Leslie Koepke, human development, family living and community educational services; Jonas Amoapim and Don Olson, technology; James Tenorio, communications, education and training; Frances Garb, biology; and Mary Orfield, chemistry.

Promoted from assistant professor to associate professor are Arlene Cooper, counseling and psychological services; George Smeaton, psychology; Anita Pershern, food science and nutrition; Robert Salt, human development, family living and community educational services; Kimberly Kluver, business; Edwin McDaniel, technology; Ned Weckmueller, industrial management;

Richard Gardner Jr., English; James Ley, mathematics; and Eugene Ruenger, chemistry.

Fraser was also granted tenure, along with Howard Lee, communications, education and training; John Vranek, technology; John Wright, business; Louis Miller, biology; and Sharon Nero and Mahshid Jalilvand, social science.

Louis Klitzke, psychology; and Arnold Sax, rehabilitation, were named professor emeritus by the regents.

Mary Donley, Learning Resources; Carol Hogstad, education; and Erna Jackle, apparel, textiles and design, were named associate professor emeritus.

Daniel Newhall, Administrative Services, was named director emeritus; Glen Schuknecht, Administrative Services, was named director and associate professor emeritus; and Samuel Wood, Student Services, was named assistant chancellor and professor emeritus.

Emeritus status is an honorary designation by the regents for retired unclassified staff members.

Remodeling projects given go-ahead

A \$5.3 million remodeling project for Fryklund Hall was endorsed recently by the State Building Commission.

Chancellor Charles W. Sorensen said that the project underscores the ongoing partnership between the UW System and the state in promoting economic development. "The Fryklund Hall project is an essential element in our technology transfer program, which prepares our graduates to serve business and industry and also provides direct support through our research facilities and staff," Sorensen said. "We certainly are sensitive to the state's tight financial situation, but we also believe that we must continue to move forward by judicious use of funds that promise an economic payback for Wisconsin. Fryklund Hall certainly falls in that category."

The project involves remodeling the entire 31-year-old building to accommodate changes in technology programs at UW-Stout. Instructional laboratories will be refitted to reflect the high technology incorporated in today's modern manufacturing industry.

Sorensen said that while UW-Stout has a long history of economic development, its reputation in this area continues to grow. Numerous businesses in the state have been retained through the assistance of UW-Stout in retooling them for modern technology, Sorensen said. "UW-Stout has been on the cutting edge of modern technology as it applies to the manufacturing sector, and the Fryklund Hall project will be important in helping us maintain that edge." Sorensen praised UW System President Kenneth Shaw, the Board of Regents, the Building Commission and Gov. Thompson for recognizing the importance of the project. He said such support shows that UW-Stout is "on the right track" with its technological projects.

The commission also approved a \$1.7 million remodeling project for the Memorial Student Center, to be supported by fee money; and okayed planning money for a remodeling project at Jarvis Hall. The Jarvis project would be constructed in the 1993-95 biennium.

Sorensen receives higher education award

Chancellor Charles W. Sorensen was honored recently for his contribution in advancing the status of women in higher education.

Sorensen was presented the award in Madison at a statewide Women in Higher Education conference, which carried the theme "Celebrating our Achievements — Designing our Future."

Sorensen received a limited edition lithograph by UW-Madison artist Debora Wood which was presented by the conference sponsors: the Office of



Sorensen

Equal Opportunity Programs and Policy Studies, the Women's Studies Consortium of the University of Wisconsin System, and Wisconsin Women in Higher Education

Administration, a statewide consortium of women administrators. The presentation to Sorensen was made by Virginia Wolf, special assistant to the chancellor at UW-Stout.

Gillett receives graduate faculty award

Amy Gillett, an assistant professor of education, is the recipient of a newly established Outstanding Graduate Faculty Award.

This award is presented by the Graduate Student Council to recognize quality education. Selection is based on four criteria: professional attitudes, social interaction, advisement and teaching.

Molly Koupal, vice president of the organization said the award is intended to "recognize the outstanding graduate faculty educator who builds on tradi-

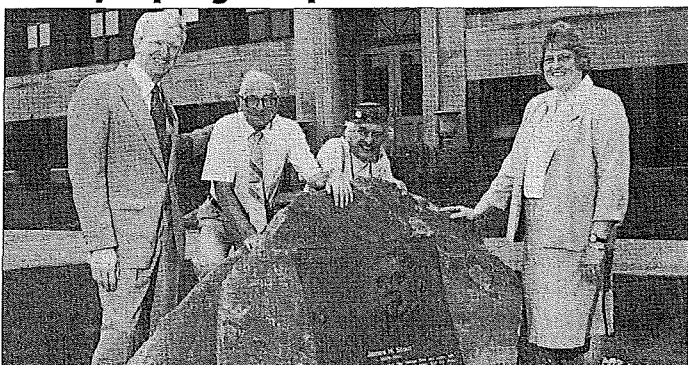


Gillett

tion to prepare for tomorrow."

Gillett received her Ph.D. in education from the University of North Dakota, and a bachelor's degree in music and a master's degree in special education from St. Cloud State. She joined the faculty in August 1990.

Stout plaque given permanent home



A bronze memorial plaque of UW-Stout founder James Huff Stout was given a permanent home. The plaque has been attached to a stone formation constructed between Harvey Hall and Bowman Hall. Posing near the plaque are

Chancellor Charles W. Sorensen; Dwight Agnew, dean emeritus, who provided funds for the plaque; UW-Stout artist Alan Gamache, who created the piece; and Brenda Swannack, chair of the Campus Physical Development Committee.

Davis named counselor of the year

Gerald Davis, a retired faculty member, has been named Regional University/College Counselor of the Year for 1990 by the American School Counselor Association. The award was presented by the ASCA's Professional Recognition Committee at the annual convention of the American Association for Counseling and Development in Reno, Nev.

Mary Gehrke, M.S. '75, was presented the Hazel L. Dunning Elementary School Counselor of the Year award at that same meeting.

Davis was on the UW-Stout staff as director of the master's and specialist degree program in guidance and counseling. He developed a counselor in-

ternship program for UW-Stout and did cooperative work with the Wisconsin Department of Public Instruction. He was also a leader in creating and implementing what is known as the Wisconsin Developmental Guidance Model.

Gehrke, who resides in Racine, has been chair of the Wisconsin Task Force, the group that obtained mandated elementary counseling for the state. She has held several statewide posts, including president and vice president of Wisconsin School Counselor Association. On the national level, she has served as elementary vice president, professional recognition chair and as a member of the ASCA executive board.

Teaching and service awards announced

Paul Ngo, an assistant professor of psychology, was the recipient of this year's Outstanding Teaching Award. Samuel E. Wood, assistant chancellor for students and dean of students, received the Outstanding Service Award.

Ngo has been on the staff since fall of 1989. He teaches perception, experimental psychology, environmental psychology and general psychology. He has also developed a cross-cultural psychology course which examines the experiences of Southeast Asians in Western society. Ngo serves as an adviser to both graduate and undergraduate students.

Wood retired this summer after 27 years at Stout. He has held various positions, including registrar, dean of admissions and records, and assistant to the vice president. He was appointed dean of students in 1971 and assistant chancellor in 1974.

Before coming to Stout in 1964, Wood



Ngo



Wood

was director of Guidance Services for the public schools in Fond du Lac. He has an undergraduate degree from the University of Northern Iowa, Cedar Falls, and a graduate degree from the University of Iowa, Iowa City.

Ngo holds a bachelor's degree in psychology from Rutgers University and a master's degree and doctorate from University of Notre Dame.

Students voted for this year's recipients during elections in April.

Lee appointed associate dean

Howard Lee has been appointed associate dean of the School of Industry and Technology.

Lee has been interim associate dean since 1989 and served as director of the university's master of science degree in vocational education from 1986-1989.

Prior to coming to UW-Stout, Lee was a staff development specialist and instructional developer at White Bear Lake, Minn., School District 916; he also



Lee

worked as an evaluation consultant at Northwest Bell Training Center, Minneapolis.

Lee holds a Ph.D. in education from the University of Minnesota; and an M.S. and a B.S. in industrial education from UW-Stout.

Smalley receives award

Lee Smalley, a professor of communications, education and training, has received the Award of Distinction from the International Association of Technology Education.

Smalley was presented the award recently during the organization's 53rd annual conference in Salt Lake City. The award states that Smalley has earned national distinction for excellence in teaching, research and scholarship.

To receive this award, recipients must

be nominated and supported by their colleagues; and voted on by the organization's Professional Recognition Committee. Only 14 other individuals have received this award in the history of the organization.

Smalley has been on the UW-Stout staff since 1965. He teaches future studies. He has also been active in developing curriculum for the history and philosophy of technology.

Agreement signed with Milwaukee schools

In a move to increase minority enrollment, UW-Stout has entered into formal partnerships with two Milwaukee high schools that have a high percentage of minority students. Both schools have specialty programs that match some of UW-Stout's specialized majors.

Both agreements recognize "the strong commitment and the strong desire of UW-Stout to increase the number of minority students."

Custer High School's technical education specialty and teacher education programs match those fields at UW-Stout which include education, technical education, applied technology and other areas. Custer has a minority student population of about 65 percent.

Milwaukee South has specialty programs in hotel and restaurant management, food service, and travel and tourism, areas offered at the university level by UW-Stout. About 70 percent of South's students are minorities.

Both agreements are designed to increase the number of students going on to higher education and to enhance the quality of their educational experiences. UW-Stout staff members will visit the schools regularly and students from the schools will spend time on campus involved in precollegiate programs.

The agreements are a part of the university's overall design for diversity plan, an ongoing program to increase and retain minority students and staff.

Sorensen outlines issues facing university

"We face some of the most challenging issues in higher education ever; we are a school with the philosophy that truly can be a beacon light for the 21st Century," University of Wisconsin-Stout staff members were told by Chancellor Charles W. Sorensen.

Sorensen delivered his remarks as part of a week of activities marking the opening of the academic year at UW-Stout.

Sorensen told the staff that the decade will bring many challenges and that some will be faced early on. "The key will be, I believe, to maintain our philosophy of education yet be willing and able to change, to adjust to demands, to do things differently when necessary," he said.

He added that during his first three years as chancellor a number of positive changes have occurred. He said UW-Stout is on the verge of getting permission to plan a manufacturing engineering program, has centralized telecommunication and computing on campus, has increased its expenditures in human resource development such as support for people pursuing doctoral programs and has increased the number of sabbaticals offered annually.

He also said the University Foundation continues to provide important support for faculty. There are growing partnerships to the private sector, and affirmative action and design for diversity programs are making progress. He also cited positive change in the university student affairs, administrative services and academic affairs divisions.

"We will continue to focus on maintaining high levels of service, yet doing so more efficiently so we can channel more funds into vital need areas on campus," he said.

He said that salaries and budgets are two problems being faced by the university. "I wish I could be more optimistic, but we received poor raises; we are dedicating time and effort to convince the state for the need (for adequate salary compensation) and we will continue," he said.

He added that although budgets have been slashed "we will have to adjust to that but we still have, with

good management, an adequate budget. Budget will dominate all of our thinking and we simply must do things more efficiently, we must rethink how we do things to become more efficient because there will be little, if any, new money."

Sorensen did add, however, that the university did well in its capital building budget, "the best for UW-Stout in years," and increased lab modernization money. Sorensen outlined issues that will be faced by UW-Stout in the next several years:

- **Curriculum.** Issues here include general education, writing across the curriculum, capping majors at 124 credit hours and an honors program. "With the explosion of knowledge, we must rethink what an undergraduate degree is and it cannot simply be adding more credits to the BA or BS degree," he said.
- **Enrollment management.** Sorensen said the university must continue to control enrollment and must shift these controls to the program level in order to follow the spirit of enrollment reductions by shifting money to other need areas. He said the university must provide access to those who should be enrolled here but must market and target recruitment to high achievers.
- **Design for Diversity.** He said the university must "continue this fine effort" of attracting and retaining minority students and staff.
- **Sense of Community.** "We must work toward creating an environment envious among state schools; where ideas thrive, where dissenting opinions can be discussed, where a sense of community can develop and thrive, where excellence is present everywhere," Sorensen said.
- **Total quality management.** The university must "develop this as a pervasive atmosphere," Sorensen said.

Sorensen said the university has an opportunity to "take charge of change and direct it where our vision leads and that is exactly what we are doing."

Hendzel appointed physical plant director

Theodore S. Hendzel Jr. has been appointed director of Physical Plant.

Hendzel holds a master's degree in engineering management from the Illinois Institute of Technology, and a bachelor's degree in engineering from the University of Illinois. He has 18 years of experience in facilities management, including six years as supervisor of plant engineering and occupancy services at AT&T-Bell Laborato-

ries, Naperville, Illinois. His most recent position was supervisor of plant facilities at Continental Can Company, Elk Grove, Illinois since 1987.

Hendzel is responsible for management and direction of the physical plant operations, including building maintenance, grounds, custodial services, central heating plant, mail, fleet services and construction project management.

The Sports Page

Football greats inducted into Hall of Fame

Four outstanding athletes who distinguished themselves in football at UW-Stout were inducted into the university's Hall of Fame at ceremonies Saturday, Sept. 14.

Honored were Tom Paulus, Fredonia, Wis., a 1981 graduate; Gaylord Herbst, Seymour, Wis., who received his bachelor's degree in 1966 and his master's in 1967; Terrance Hickman, Ironwood, Mich., bachelor's degree in 1967 and master's in 1968; and Gordon von Gonten, Milwaukee, 1938.

Paulus is remembered as one of the toughest linebackers ever to play the position at UW-Stout. He was named most valuable player in the Wisconsin State University Conference and second team All-American his senior year. Among the many other honors he accumulated during his four years as a Blue Devil was the NAIA's Scholar/Athlete Award. He co-captained the Blue Devils his senior year. Paulus heads his own construction firm, T.P. Construction Inc.

A two-sport star, Herbst lettered in baseball and football from 1962-1966. He was a member of the Wisconsin State University Conference championship team in 1965 and was named to the all-conference team as a defensive back in both 1964 and 1965. He captained the football team in both of those years. Herbst received honorable mention All American honors in 1965. He is an industrial technology department chair and athletic director at Seymour High School.

Hickman was also a member of the 1965 championship team, lettering in each of his four years. He played on



Paulus



Herbst



Hickman



von Gonten

offense, defense and special teams, earning the reputation as an "iron man" until an injury limited his play to the offensive line his junior and senior years. He was twice named to the all district team and twice honorable mention All-American. Clinical director at Gogebic County Community Mental Health Center and a psychologist in private practice, he earned his doctorate in psychology from Brigham Young University.

While building an outstanding athletic record during the 1930s, von Gonten captained both the football and basketball squads at Stout. He lettered four years in football and basketball from 1934 through 1937. He was president of his senior class and went on to distinguish himself in industry.

Athletic directors appointed

William Burns and Rita Slinden have been named interim co-directors for the department of physical education and athletics. Slinden will supervise women's athletics and the academic aspects of the department. Burns will supervise men's athletics and will retain a teaching assignment. The appointments will be for one year while a search is conducted to replace Annette Caruso-

Howatt, who is stepping down as athletic director to accept a teaching assignment in the department. Slinden has been the department's administrative associate and was interim director before Howatt's appointment. Burns was athletic director for nine years before returning to the classroom. Both have been on staff since 1971.

Changes made in athletic program

UW-Stout's athletic program will undergo several changes. The changes are being put into place after a 1990-91 special task force study on physical education and athletics.

Softball, which will be added to the women's sports program beginning in spring, was also recommended by a committee studying compliance with Title IX in athletics. Both study groups identified women's fast pitch softball as

an important need for the total program. UW-Stout has been the only WWIAC school without such a program. Golf has been placed in an "inactive" status and the university will not field a team this year. This change will not be considered a permanent decision until further careful review has been completed, considering all alternatives to reduction and possible revision of the total athletic program.

A Technological Asset

By Charles W. Sorensen, Chancellor

Higher education can play a significant role in the nation's economic future, according to a recent report by the Council on Competitiveness, a non-partisan organization of chief executives from business, higher education and organized labor who have joined to work toward improving the ability of American companies and workers to compete more effectively in world markets.

The report, quoted in a newsletter from the American Association of State Colleges and Universities, said America is now falling short in meeting the challenges of commercial technology. But it also notes that this problem can be dealt with through close cooperation between government and private sectors. "[I]n order to create quality jobs, generate strong economic growth and safeguard national security, the U.S. government and private sector should work together to develop coherent policies to ensure U.S. leadership in the development, use and commercialization of technology..." the report is quoted by AASCU as saying.

Here is where higher education comes in: The report says that colleges and universities are great technological assets and that the quality of education provided to graduates will leave an important mark on the competitiveness of businesses.

All of this is of particular interest to UW-Stout, because not only does it provide a blueprint for the future, it reinforces the importance of many programs we already have in place. For many other colleges and universities, new programs called for in the report are several years away; at UW-Stout, they are here today.

For example, the report urges institu-

tions of higher education to develop close ties with industry in order to share important technology developments. You will note in articles elsewhere in this edition of Stout Magazine that the services provided through the various units of the UW-Stout Technology Transfer Institute are already providing important technological services to the private sector.

The report calls for placing heavier focus on manufacturing systems in undergraduate curriculum, something that has been an integral part of our educational offerings for many years.

Another section of the report speaks of using adjunct classroom instructors who are active in industry and familiar with modern industry practices. Certainly, this describes the dozens of industrial leaders who have taught here for more than a

decade as part of our Sponsored Industrial Professor Program.

Still another section of the report says that institutions should encourage students to spend time in industry, which we are now accomplishing through a highly successful co-op program where students earn academic credit while serving in productive roles with industry.

Our having arrived so quickly at these futuristic and progressive ideas is no mere accident. UW-Stout has a long tradition of application-oriented education, dating back to its very beginning. This approach has changed and evolved over the years, to meet emerging needs. We can be proud for what we have accomplished, but we can also be hopeful for future recognition of the contribution UW-Stout will make to the nation's economy.

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Stout Magazine

Stout Magazine is an official publication of University of Wisconsin-Stout. It is published biannually by the Office of University Relations and is distributed to graduates, friends and faculty of the University. It is entered at the post office in Menomonie, Wis., as third class matter.

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Stout Magazine
University of Wisconsin-Stout
Menomonie, Wisconsin 54751